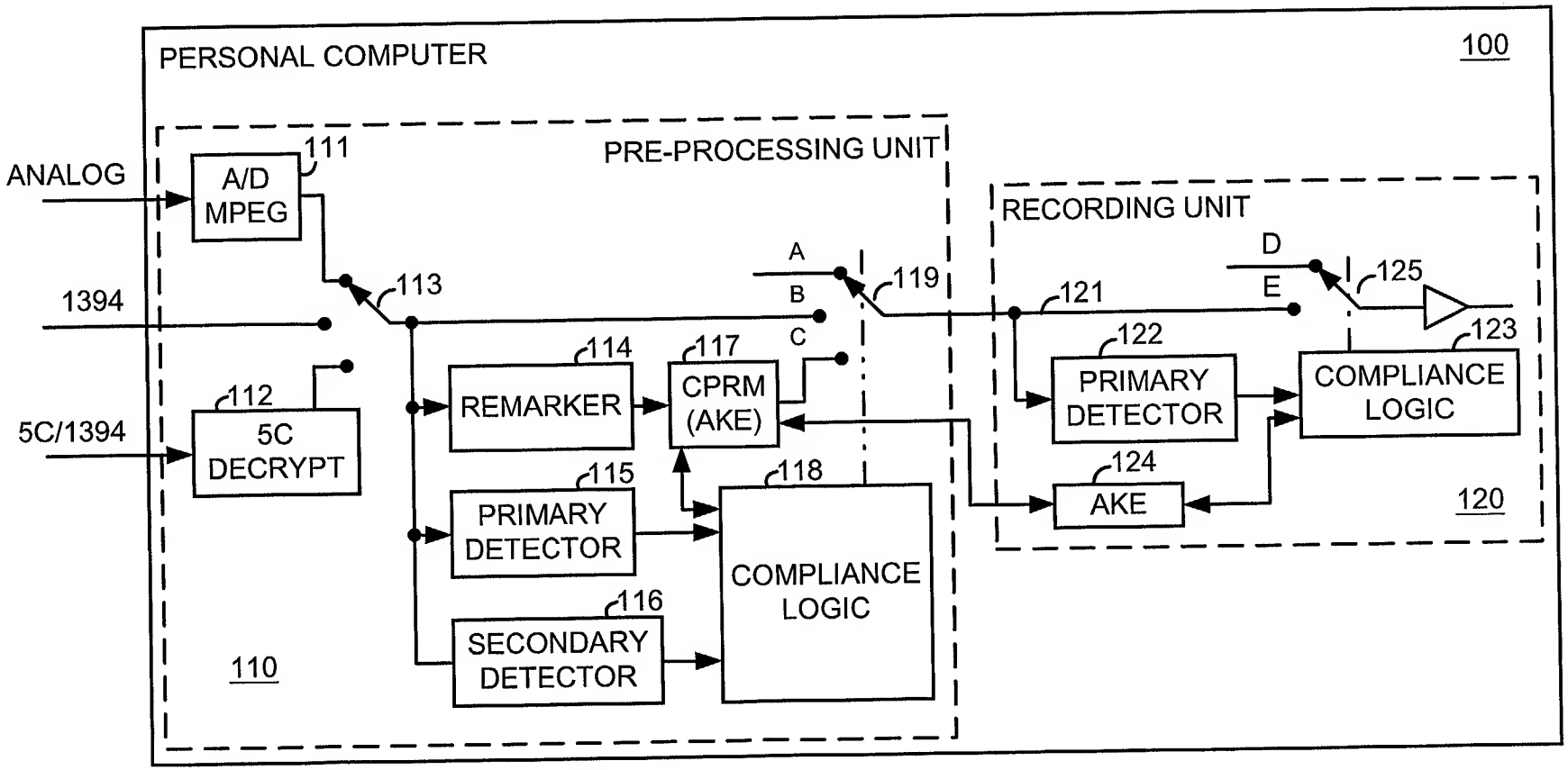
PERSONAL COMPUTER
100
PRE-PROCESSING UNIT
ANALOG
A/D MPEG
111
1394
113
A
B
C
119
RECORDING UNIT
D
E
125
121
122
123
PRIMARY DETECTOR
COMPLIANCE LOGIC
5C/1394
112
5C DECRYPT
REMARKER
114
CPRM (AKE)
117
115
PRIMARY DETECTOR
118
COMPLIANCE LOGIC
116
SECONDARY DETECTOR
124
AKE
120
110

FIG.1

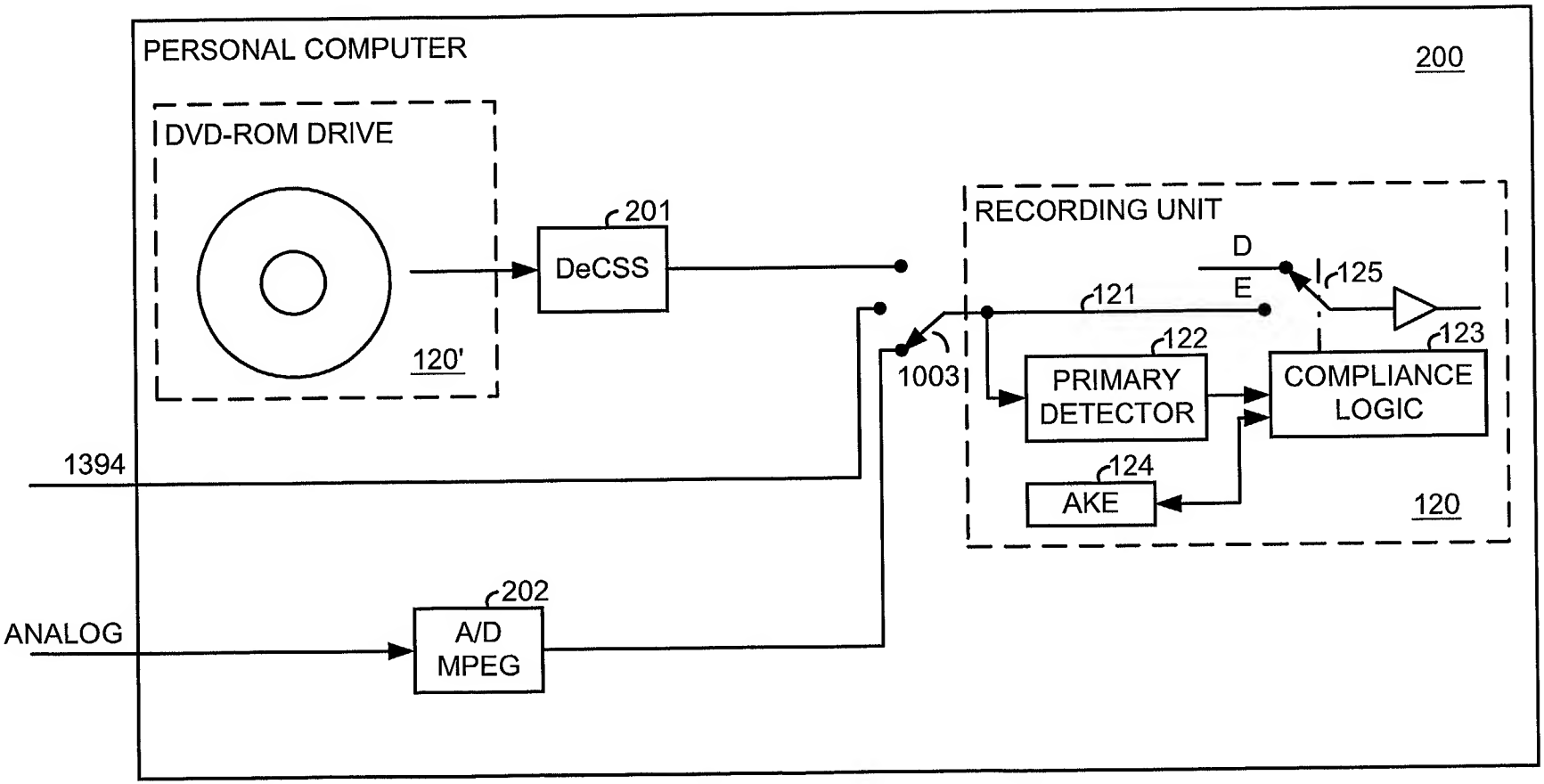
PERSONAL COMPUTER
200
DVD-ROM DRIVE
120'
201
DeCSS
RECORDING UNIT
D
E
125
121
122
123
PRIMARY DETECTOR
COMPLIANCE LOGIC
1003
124
AKE
120
1394
ANALOG
202
A/D MPEG

FIG.2

CN	CNM	CO	SC	A	B	C
1	X	X	X	1	0	0
0	1	X	X	1	0	0
0	0	0	X	0	1	0
0	0	1	1	0	0	1
0	0	1	0	1	0	0

FIG.3

CN	CO	SC	D	E
0	0	X	0	1
1	0	1	X	X
0	1	1	X	X
1	0	0	1	0
0	1	0	1	0

FIG.4

CN	CO	SC	D	E
0	0	X	0	1
1	0	X	1	0
0	1	1	X	X
0	1	0	1	0

FIG.5

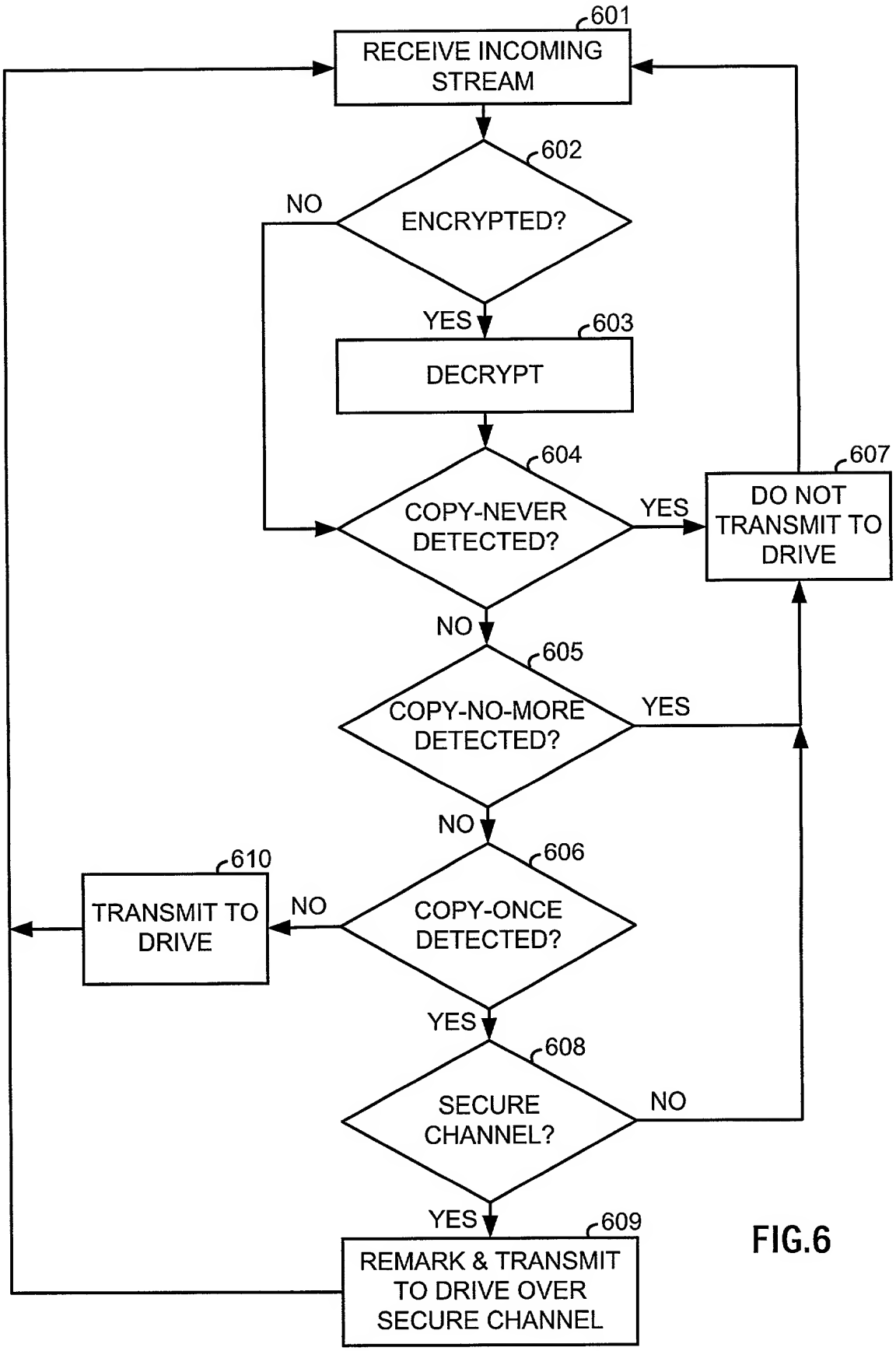
601
RECEIVE INCOMING STREAM
602
ENCRYPTED?
NO
YES
603
DECRYPT
604
COPY-NEVER DETECTED?
YES
607
DO NOT TRANSMIT TO DRIVE
NO
605
COPY-NO-MORE DETECTED?
YES
NO
606
COPY-ONCE DETECTED?
NO
610
TRANSMIT TO DRIVE
YES
608
SECURE CHANNEL?
NO
YES
609
REMARK & TRANSMIT TO DRIVE OVER SECURE CHANNEL

FIG.6

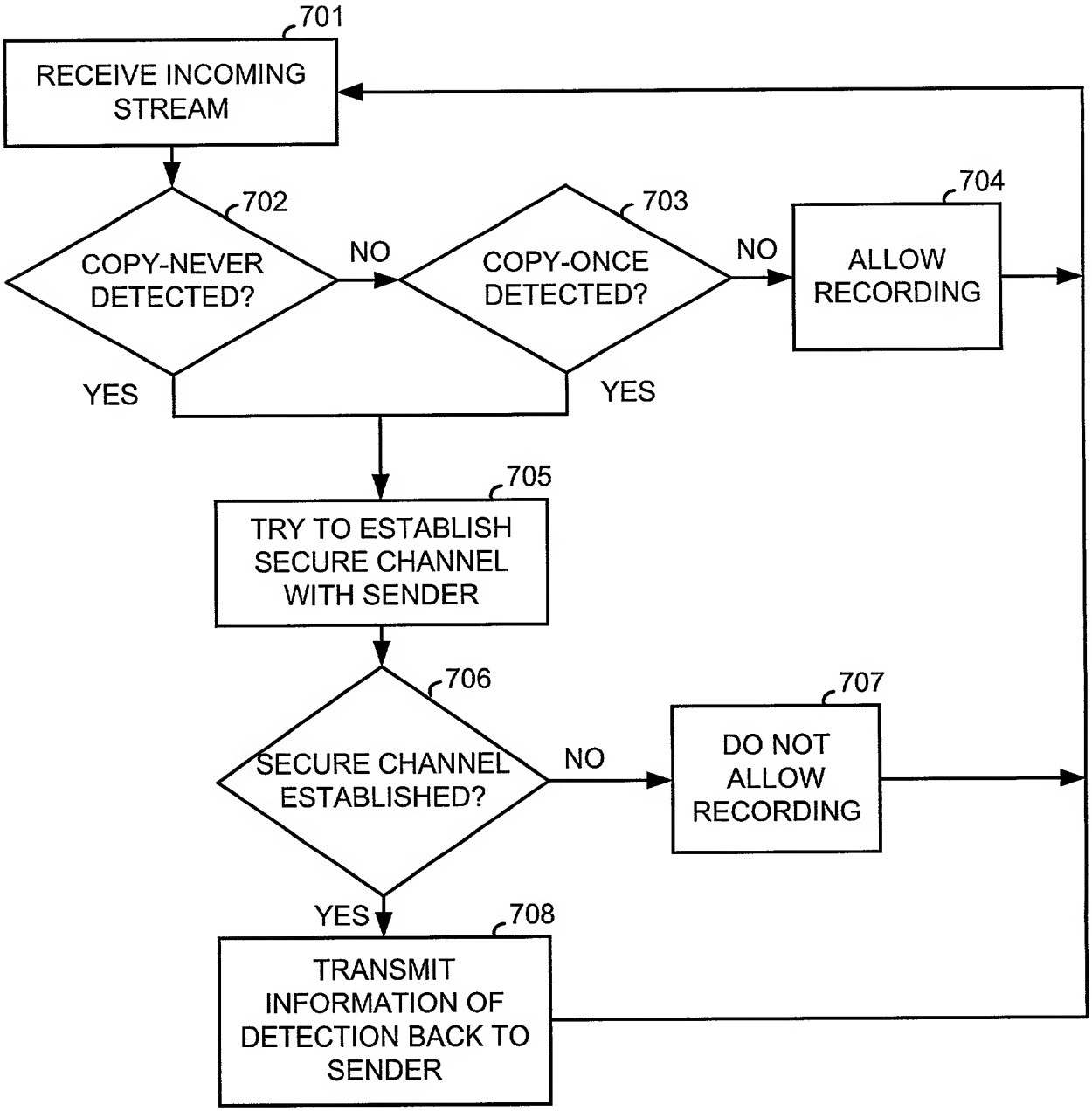
701
RECEIVE INCOMING STREAM
702
COPY-NEVER DETECTED?
NO
703
COPY-ONCE DETECTED?
NO
704
ALLOW RECORDING
YES
YES
705
TRY TO ESTABLISH SECURE CHANNEL WITH SENDER
706
SECURE CHANNEL ESTABLISHED?
NO
707
DO NOT ALLOW RECORDING
YES
708
TRANSMIT INFORMATION OF DETECTION BACK TO SENDER

FIG.7

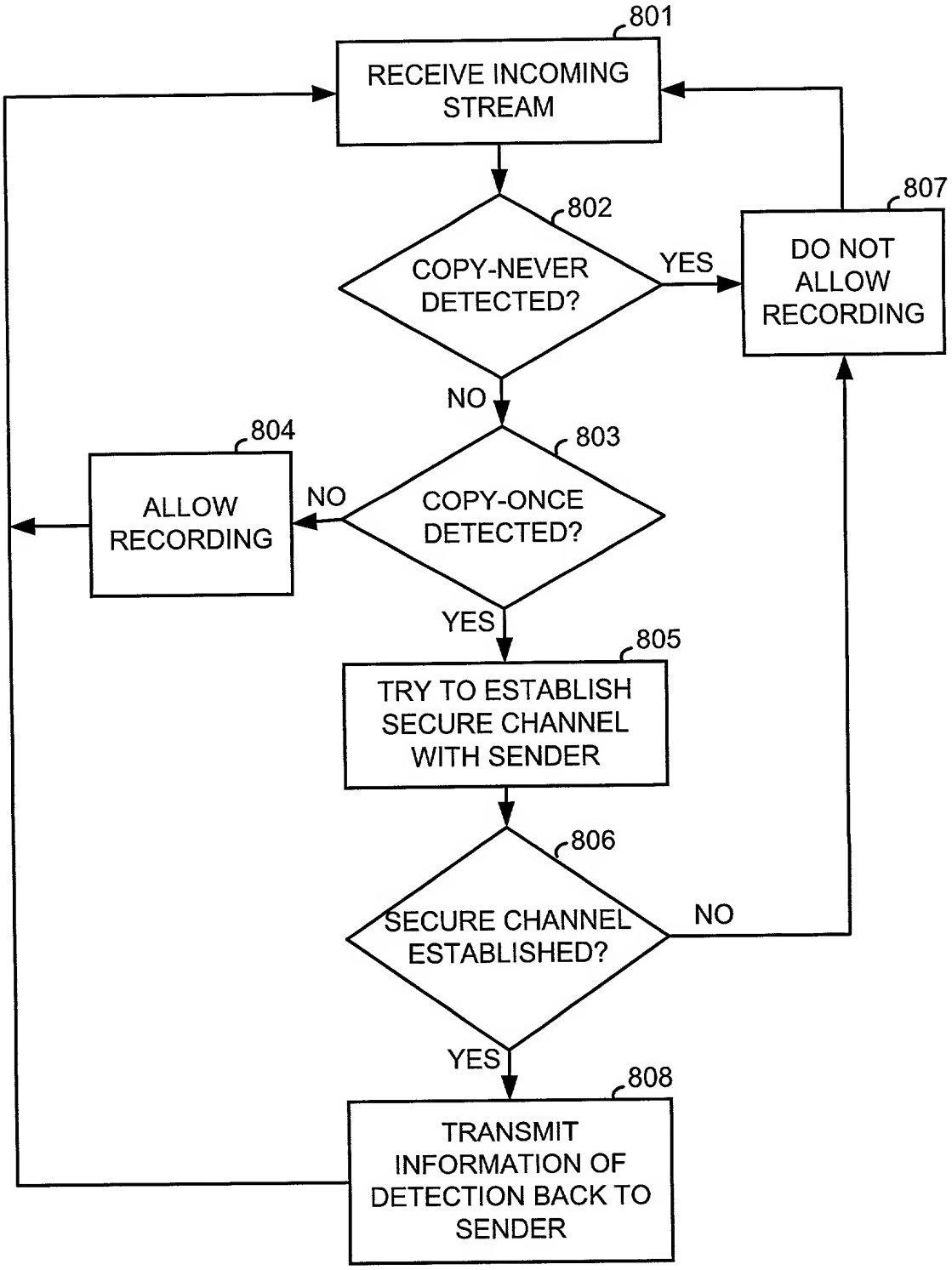
801
RECEIVE INCOMING STREAM
802
COPY-NEVER DETECTED?
YES
807
DO NOT ALLOW RECORDING
NO
804
803
ALLOW RECORDING
NO
COPY-ONCE DETECTED?
YES
805
TRY TO ESTABLISH SECURE CHANNEL WITH SENDER
806
SECURE CHANNEL ESTABLISHED?
NO
YES
808
TRANSMIT INFORMATION OF DETECTION BACK TO SENDER

FIG.8

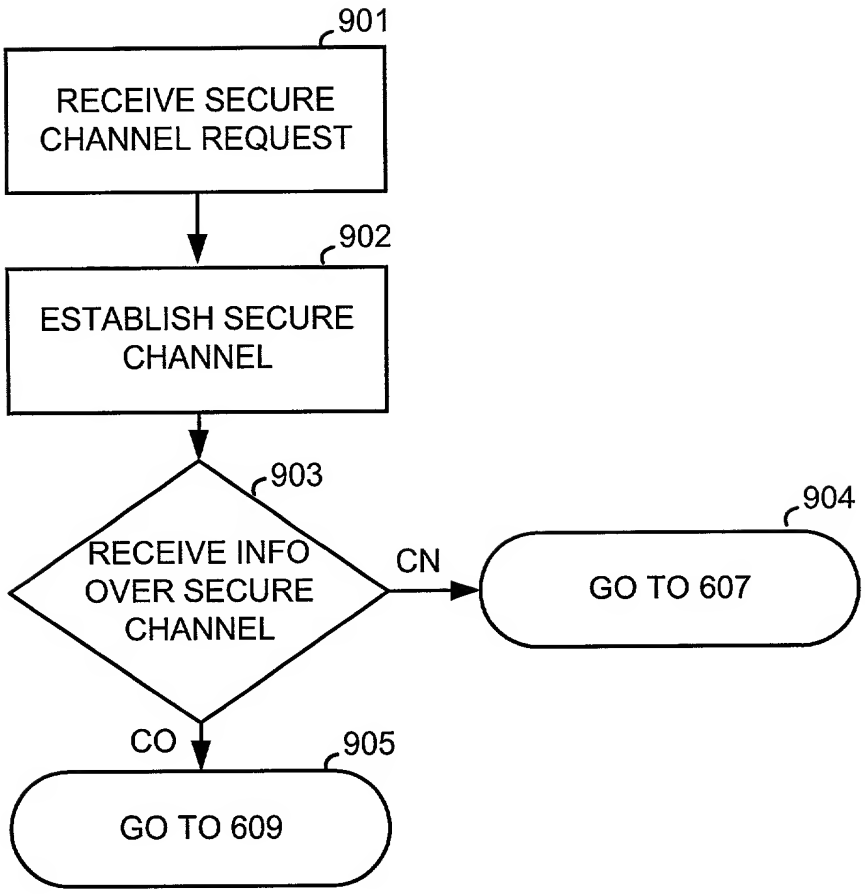
901
RECEIVE SECURE CHANNEL REQUEST
902
ESTABLISH SECURE CHANNEL
903
RECEIVE INFO OVER SECURE CHANNEL
CN
904
GO TO 607
CO
905
GO TO 609

FIG.9

Top Secret

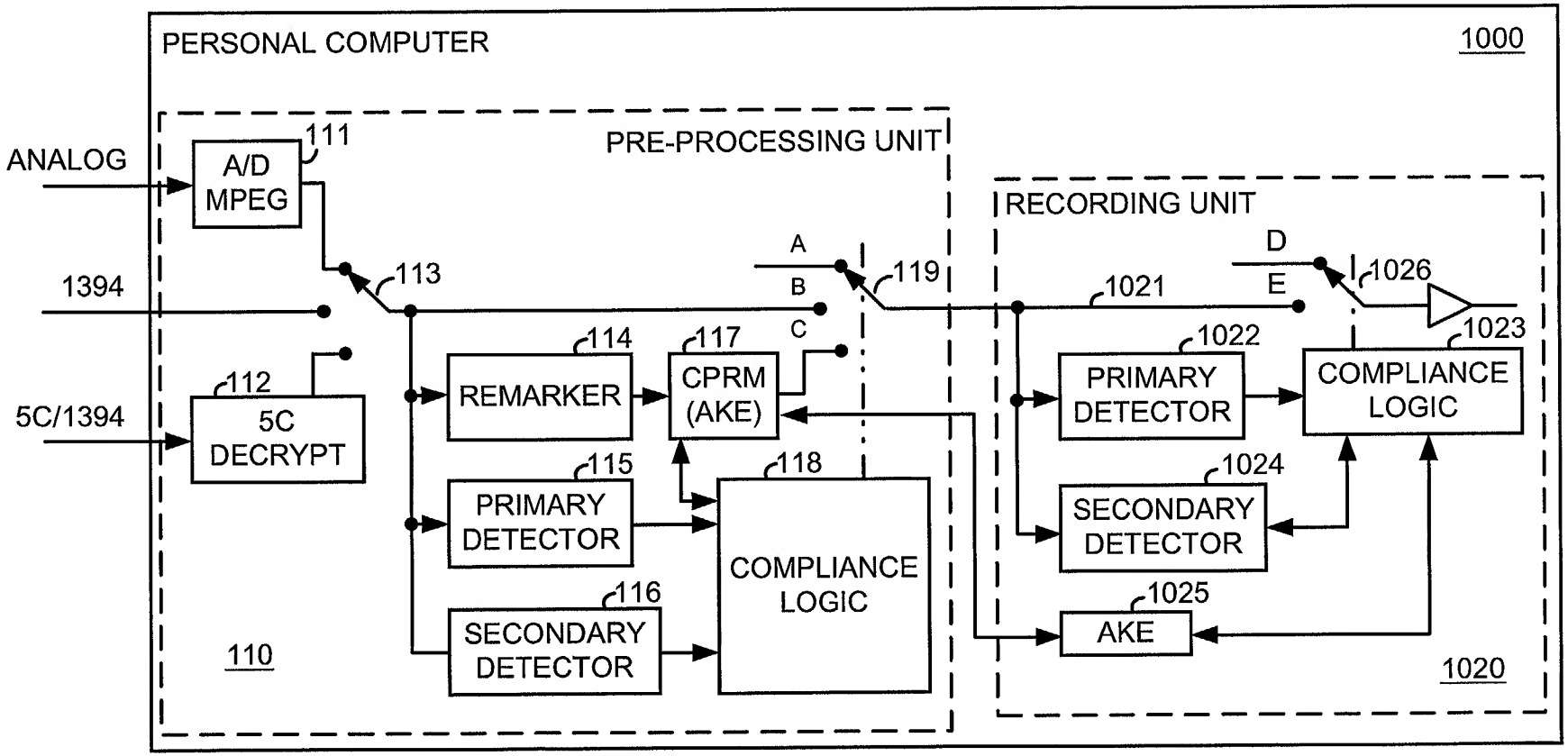

FIG.10

CN	CNM	CO	SC	D	E
0	0	0	X	0	1
1	0	0	1	X	X
1	0	0	0	1	0
0	0	1	1	X	X
0	0	1	0	1	0
0	1	1	1	X	X
0	1	1	0	1	0

FIG.11

CN	CNM	CO	SC	D	E
0	0	0	X	0	1
1	0	0	X	1	0
0	0	1	1	X	X
0	0	1	0	1	0
0	1	1	X	1	0

FIG.12

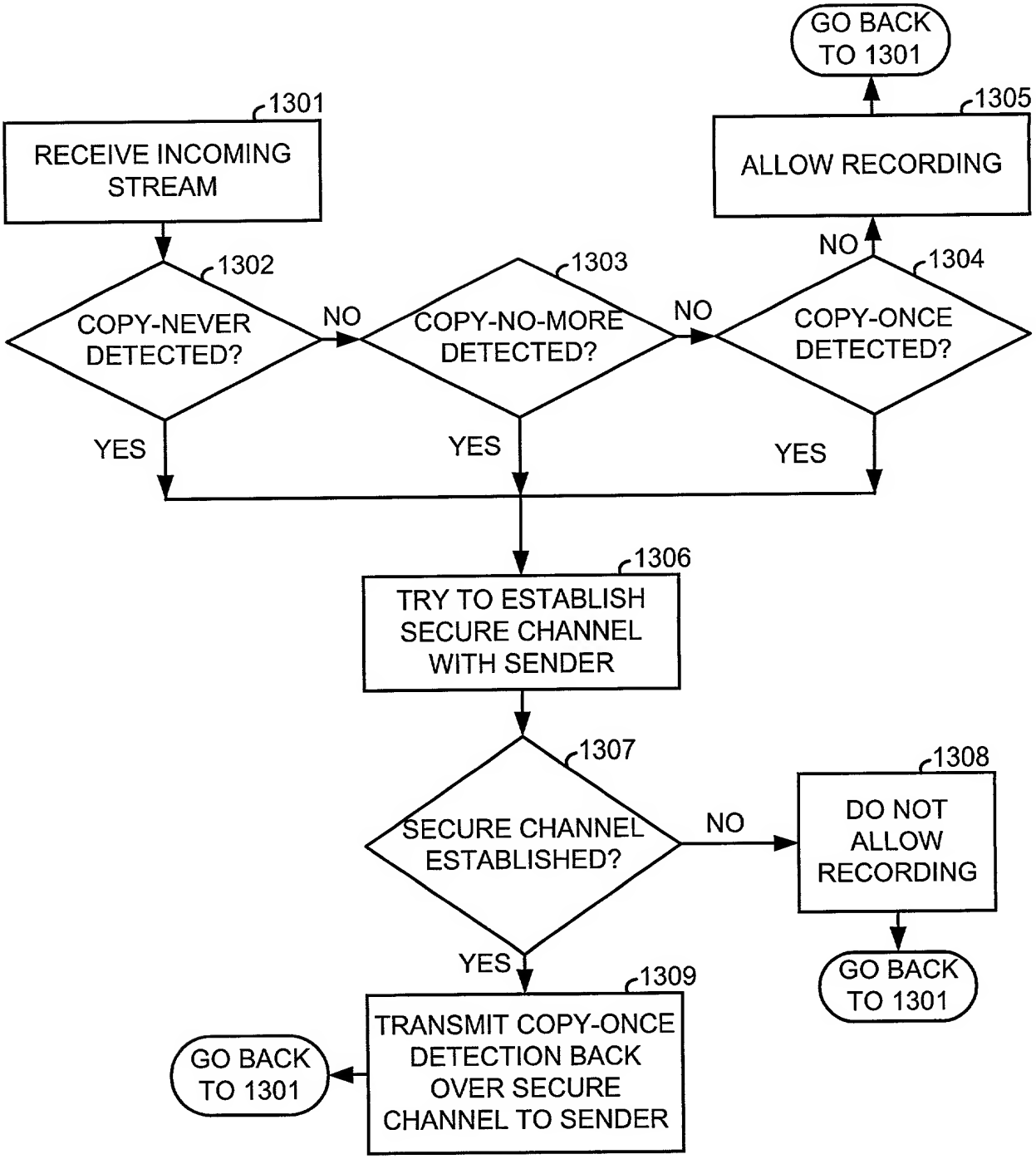
GO BACK TO 1301
1305
ALLOW RECORDING
1301
RECEIVE INCOMING STREAM
NO
1304
1302
COPY-NEVER DETECTED?
NO
1303
COPY-NO-MORE DETECTED?
NO
COPY-ONCE DETECTED?
YES
YES
YES
1306
TRY TO ESTABLISH SECURE CHANNEL WITH SENDER
1307
SECURE CHANNEL ESTABLISHED?
NO
1308
DO NOT ALLOW RECORDING
GO BACK TO 1301
YES
1309
TRANSMIT COPY-ONCE DETECTION BACK OVER SECURE CHANNEL TO SENDER
GO BACK TO 1301

FIG.13

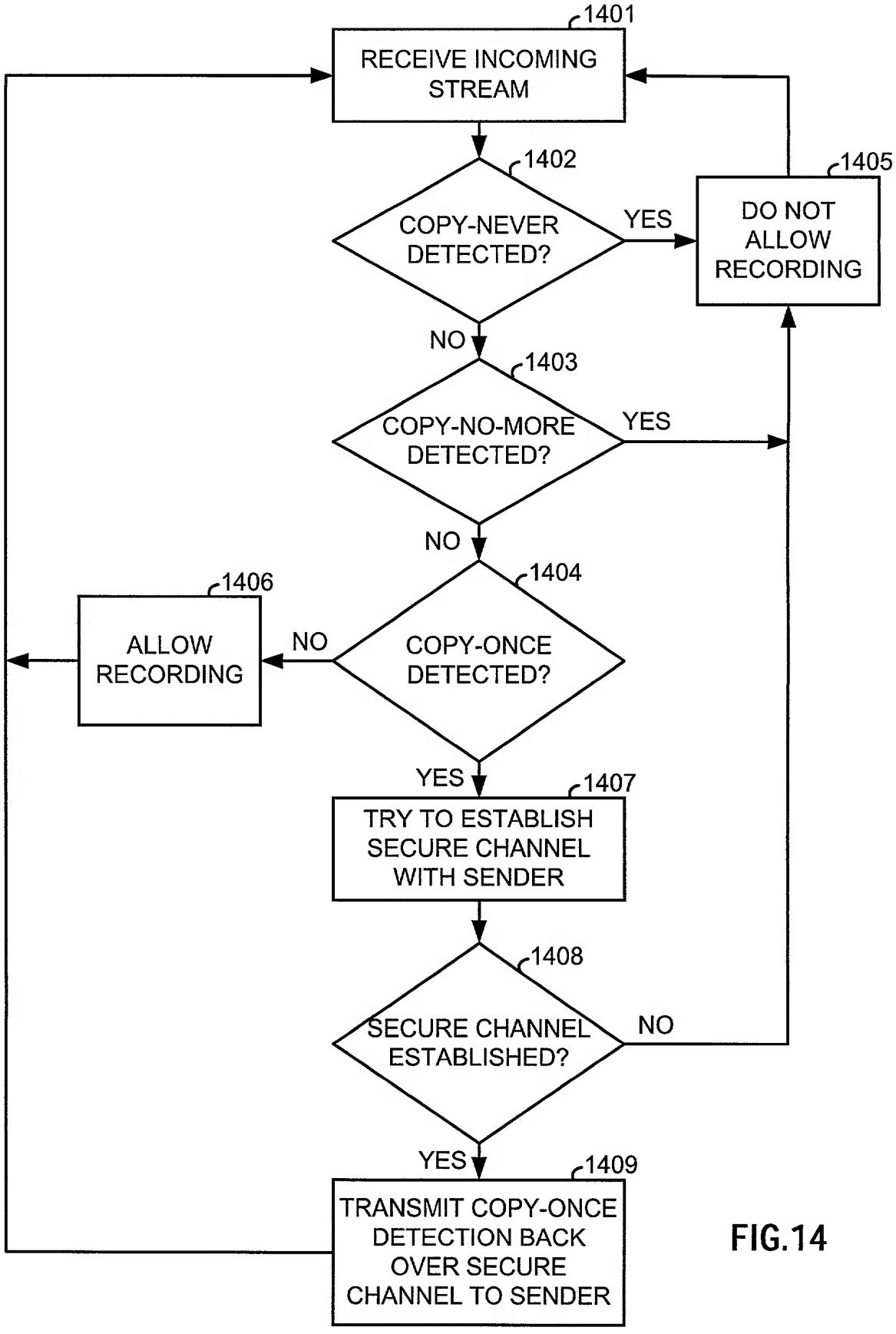
1401
RECEIVE INCOMING STREAM
1402
COPY-NEVER DETECTED?
YES
1405
DO NOT ALLOW RECORDING
NO
1403
COPY-NO-MORE DETECTED?
YES
NO
1404
COPY-ONCE DETECTED?
NO
1406
ALLOW RECORDING
YES
1407
TRY TO ESTABLISH SECURE CHANNEL WITH SENDER
1408
SECURE CHANNEL ESTABLISHED?
NO
YES
1409
TRANSMIT COPY-ONCE DETECTION BACK OVER SECURE CHANNEL TO SENDER

FIG.14